

Notice of Allowability

Application No.

09/702,196

Examiner

Oanh Duong

Applicant(s)

SHAFFER ET AL.

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2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/26/2007.
2. ☒ The allowed claim(s) is/are 63-86.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20070414</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

Oanh Duong
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INTERVIEW SUMMARY

1. Examiner contacted the undersigned attorney, Julie L. Reed, on April 12, 2007, and a proposed amendment as shown in Examiner's amendment below was sent to the undersigned for further consideration. The undersigned indicated on April 13, 2007 that the proposed amendment is acceptable and authorized examiner to enter it by Examiner's amendment.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Julie L. Reed (Registration No. 35,349) on April 12, 2007.

The claims of the invention are amended as follows:

63. (Currently Amended) A method of transmitting voice data in a network, comprising:

establishing a connection between a first device and a second device through a packet switched network using a packet switched network communications protocol;

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transmitting, from the first device, ~~original~~ the voice data in at least one original packet[[s]] to the second device through the connection;

determining a replication factor at the first device, wherein the determined replication factor is a number of replication[[s]] packets of the at least one original packet[[s]] to be made;

generating replication packets for the at least one original packet, by the first device, corresponding to the determined replication factor; and

transmitting, from the first device, the generated replication packets to the second device, each of the generated replication packets includes an index of the at least one original packet, the determined replication factor, and a redundancy index, wherein the index of the at least one original packet indicates a sequence of the at least one original packet in a voice data stream, and the redundancy index indicates a redundancy sequence number of the each of the generated replication packets that includes the voice data ~~redundant voice data by replicating the original voice data including a redundancy index, wherein the redundancy index indicates which replication the redundant voice data comprises.~~

64. (Currently Amended) The method of claim 63, further comprising:

determining if a replication flag has been set;

if the replication flag has been set, determining [[a]] the replication factor comprising determining an under-utilization of a modem.

65. (Currently Amended) The method of claim 64, further comprising setting ~~the~~ [[a]] replication flag based on ~~one of~~ either reception of a redundancy request or a comparison of an input error rate to a threshold.

66. (Currently Amended) The method of claim 63, wherein determining [[a]] the replication factor comprising ~~one of~~ determining an under utilization of a modem, network resources, or a redundancy request.

67. (Currently Amended) The method of claim 63, wherein transmitting the generated replication packets ~~redundant voice data~~ comprising transmitting the redundant voice data of the voice data as additional voice packets.

68. (Currently Amended) The method of claim 67, wherein transmitting the redundant voice data as the additional voice packets comprising transmitting the additional voice packets with redundancy indices.

69. (Currently Amended) The method of claim 63, wherein transmitting the redundant voice data as additional data in off-series original packets.

70. (Currently Amended) The method of claim 63, wherein transmitting, from [[a]] the first device, comprising transmitting from one of a transmitting endpoint ~~or~~ and a router between the transmitting endpoint and the second device.

71. (Currently amended) A first device to transmit voice data in a network, comprising:

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~~a connection to a network modem~~ for establishing a connection from ~~allowing the~~
first device to connect to a second device through a packet switched network using a
packet switched network communications protocol;

a processor to:

~~transmit, from the device, original~~ the voice data in at least one original
packet[[s]] to the second device through the connection;

determine a replication factor at the first device, ~~of how replications of the~~
~~original voice data are~~ the determined replication factor is a number of replication
packets of the at least one original packet to be created; and

generate replication packets for the at least one original packet, by the first
device, corresponding to the determined replication factor; and

transmit, from the first device, the generated replication packets to the
second device, each of the generated replication packets includes an index of
the at least one original packet, the determined replication factor, and a
redundancy index, wherein the index of the at least one original packet indicates
a sequence of the at least one original packet in a voice data stream, and the
redundancy index indicates a redundancy sequence number of the each of the
generated replication packets that includes the voice data ~~redundant voice data~~
~~by replicating the original voice data, wherein the redundant voice data has a~~
~~redundancy index indicating which replication the redundant voice data~~

comprises.

72. (Currently Amended) The first device of claim 71, the processor further to:

determine if a replication flag has been set;

if the replication flag has been set, determine ~~[[a]]~~ the replication factor
comprising determining an under-utilization of ~~[[a]]~~ the modem.

73. (Currently Amended) The first device of claim 71, the processor to determine
~~[[a]]~~ the replication factor depending upon one of ~~an~~ the under utilization of ~~[[a]]~~ the
modem, network resources, ~~or~~ and a redundancy request.

74. (Currently Amended) The first device of claim 71, the processor to transmit
redundant voice data of the voice data as additional voice packets.

75. (Currently Amended) The first device of claim 71, the processor to transmit
the redundant voice data as the additional voice packets with redundancy indices.

76. (Currently Amended) The first device of claim 71, the processor to transmit
the redundant voice data as the additional voice packets ~~data~~ in off-series original
packets.

77. (Currently Amended) The first device of claim 71 further comprising a
transmitting endpoint or a router between the transmitting endpoint and the second
device.

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78. (Currently Amended) An article of computer-readable storage medium containing instructions, that when executed by a computer for transmitting voice data in a network, cause the computer to:

establish a connection between a first device and a second device through a packet switched network using a packet switched network communications protocol;

transmit, from the first device, ~~original~~ the voice data in at least one original packet[[s]] to the second device through the connection;

determine a replication factor at the first device, ~~as to a number of replications of the original voice data~~ the determined replication factor is a number of replication packets of the at least one original packet to be created; and

generating replication packets for the at least one original packet, by the first device, corresponding to the determined replication factor; and

transmitting, from the first device, the generated replication packets to the second device, each of the generated replication packets includes an index of the at least one original packet, the determined replication factor, and a redundancy index, wherein the index of the at least one original packet indicates a sequence of the at least one original packet in a voice data stream, and the redundancy index indicates a redundancy sequence number of the each of the generated replication packets that includes the voice data ~~redundant voice data by replicating the original voice data including a redundancy index, wherein the redundancy index indicates which replication the redundant voice comprises.~~

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79. (Currently Amended) The article of claim 78, the instructions further to cause the computer to:

determine if a replication flag has been set;

if the replication flag has been set, the ~~code~~ instructions causing the computer to determine ~~[[a]]~~ the replication factor further causing the computer to determine an under-utilization of a modem.

80. (Currently Amended) The article of claim 79, the ~~code~~ instructions causing the computer to set ~~[[a]]~~ the replication flag based upon ~~one of~~ either reception of a redundancy request or a comparison of an input error rate to a threshold.

81. (Currently Amended) The article of claim 78, the ~~code~~ instructions causing the computer determine ~~[[a]]~~ the replication factor based upon ~~an~~ the under utilization of ~~[[a]]~~ the modem, network resources, or a redundancy request.

82. (Currently Amended) The article of claim 78, the ~~code~~ instructions causing ~~the computer to transmit redundant voice data~~ causing the computer to transmit the redundant voice data of the original voice data as additional voice packets.

83. (Currently Amended) The article of claim 78, the ~~code~~ instructions causing the computer to transmit the redundant voice data as the additional voice packets data in off-series original packets.

84. (Currently Amended) A first device to transmit voice data in a network, comprising:

[[a]] means for ~~allowing~~ establishing a connection between the first device to connect to and a second device through a packet switched network using a packet switched network communications protocol;

[[a]] means for transmitting, from the first device, original the voice data in at least one original packet[[s]] to the second device through the connection;

[[a]] means for determining a replication factor, the determined replication factor is a number of replication packets of the at least one original packet as to a number of replications of the original voice data will be created; and

means for generating replication packets for the at least one original packet, by the first device, corresponding to the determined replication factor; and

[[a]] means for transmitting, from the first device, the generated replication packets to the second device, each of the generated replication packets includes an index of the at least one original packet, the determined replication factor, and a redundancy index, wherein the index of the at least one original packet indicates a sequence of the at least one original packet in a voice data stream, and the redundancy index indicates a redundancy sequence number of the each of the generated replication packets that includes the voice data ~~redundant voice data by replicating the original voice data, wherein the redundant voice data has a redundancy index indicating what number replication the redundant voice data is.~~

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85. (Currently Amended) The first device of claim 84 ~~the device~~ further comprising:

means for determining if a replication flag has been set;

means for determining ~~[[a]]~~ the replication factor comprising determining an under-utilization of a modem, if the replication flag has been set.

86. (Currently Amended) The first device of claim 84 ~~the device~~ comprising a transmitting endpoint or a router between the transmitting endpoint and the second device.

REASONS FOR ALLOWANCE

3. Claims 63-86 are allowed over the prior art of record.

4. The following is an examiner's statement of reasons for allowance:

With respect to claims 63, 71, 78, and 84, the prior art of record, individually or in combination, fails to teach or suggest or render obvious the claimed invention in combination with the specific added limitations as recited in independent claims 63, 71, 78, and 84. Specially, inter alia, the prior art of record fails to teach or suggest device, article of computer readable storage medium, and method for transmitting voice data in a network, wherein replication packets for at least one original packet of the voice data is generated according to a determined replication factor, and generated replication packets is transmitted from the device, each of the generated replication packets

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includes an index of the at least one original packet, the determined replication factor, and a redundancy index, wherein the index of the at least one original packet indicates a sequence of the at least one original packet in a voice data stream, and the redundancy index indicates a redundancy sequence number of the each of the generated replication packets that includes the voice data (as defined in Applicant's specification from page 5 line 27 to page 6 line 22 and page 7 lines 6-10).

Claims 64-69, 72-77, 79-83 and 85-86 further limit the allowed claims; therefore, they are also allowed.

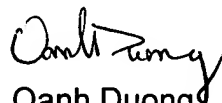
5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oanh Duong whose telephone number is (571) 272-3983. The examiner can normally be reached on Monday- Friday, 9:30PM - 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Oanh Duong
April 13, 2007